Sarah Kimball

Sensors for the Blind

My purpose is to help the visually impaired “see” with something other than a walking stick. I will assemble hardware using sensors and a microcontroller to be able to send data from the sensors to a subject. I will also make a program that will convert data from the sensors that can be used by the subject to tell where objects are around them. My goal is to make a device that will be able to sense things in front of it and tell it’s user about it. I will use a dell laptop, a Parallax microcontroller, a Parallax Ping sensor, an LED, and a helmet. I was able to build the hardware. The sensors collect data and sends it to the microcontroller which according to how far away an object is tells a LED to flash, the closer the object is the faster the LED will blink. I will change the LED to some other method of transferring the data to the subject, possibly to a vibration or by electrical stimulus, so a blind person will be able to process the information and tell what objects are closer and what objects are farther away.